LC Corio liquid counters

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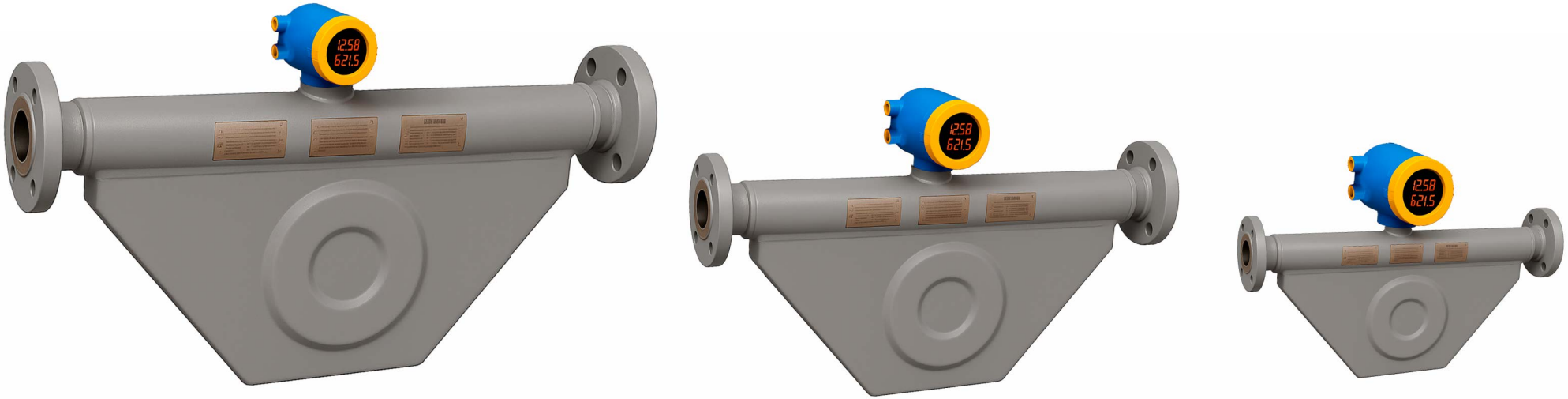

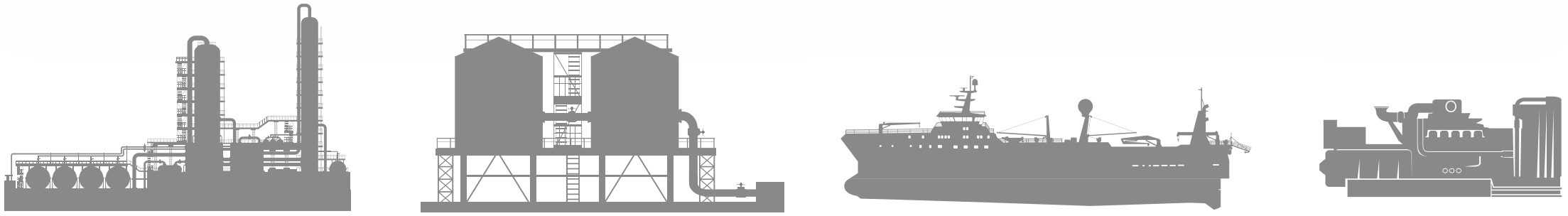

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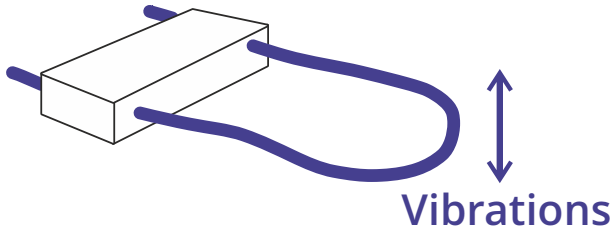
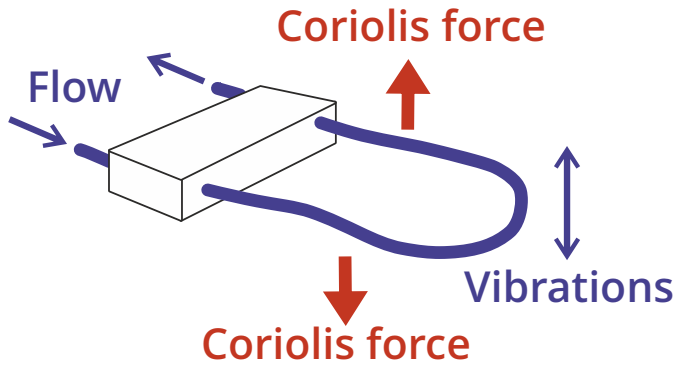
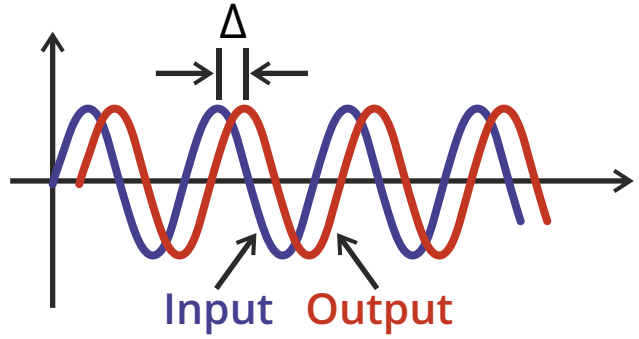
Operating principle



Meter tube without flow



Tube deflection under flow



Phase shift of oscillations with flow

As the liquid flows through the measuring tubes, Coriolis force is generated. This force causes a phase shift in the tube oscillations, which is directly proportional to the mass flow rate.

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Design advantages

- ✓ High measurement accuracy
- ✓ Suitable for pipelines of any configuration
- ✓ Resistant to vibration, temperature, and pressure fluctuations
- ✓ Capable of measuring high-viscosity liquids
- ✓ Long service life and low maintenance requirements

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Tasks

- Accurate liquid flow measurement
- Flow rate regulation of transferred liquids
- Prevention of liquid theft from pipelines
- Monitoring of liquid temperature and density

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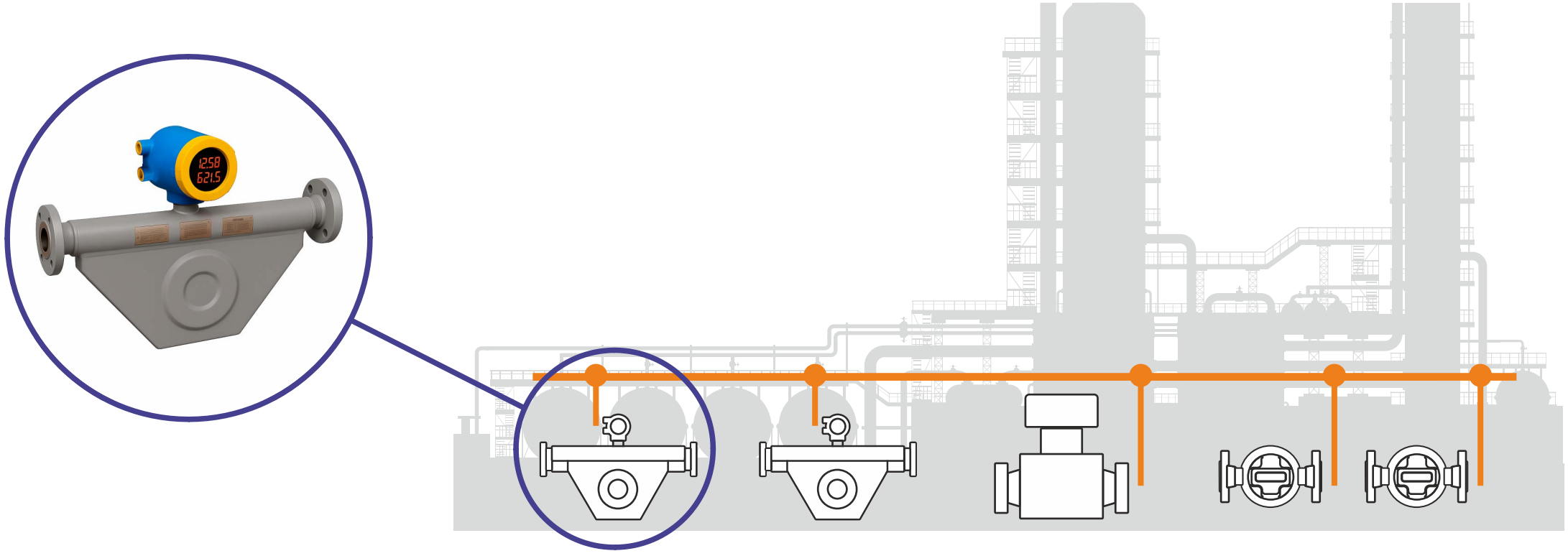
Application/ Oil and chemical industries



Flow control of petroleum products, paints and coatings, solvents, and other industrial liquids.

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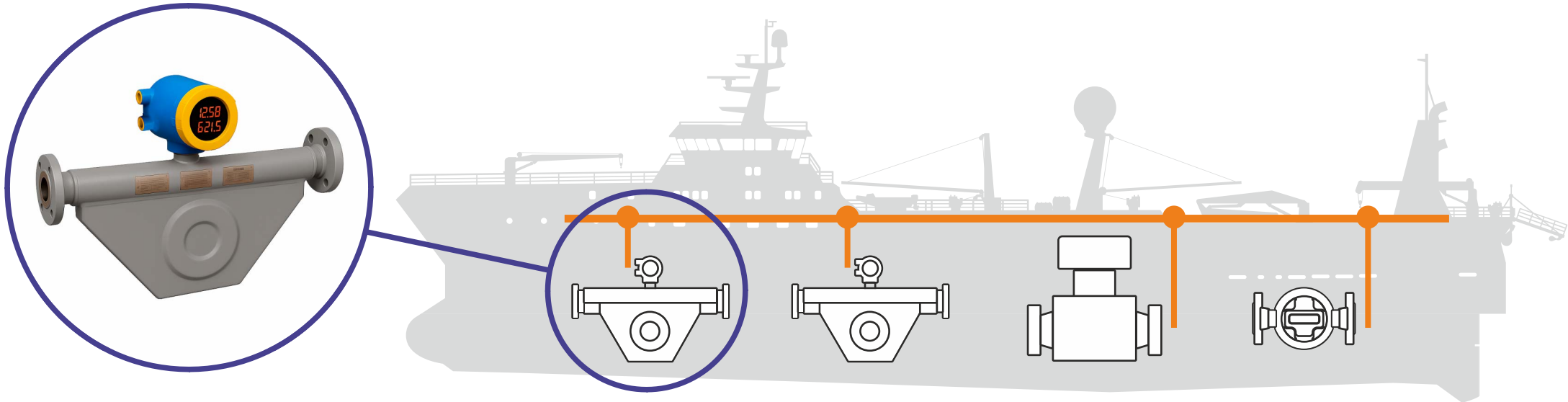
Application/ Marine engines and diesel generators



Monitoring fuel consumption by marine engines and generators (fuel oil and diesel).

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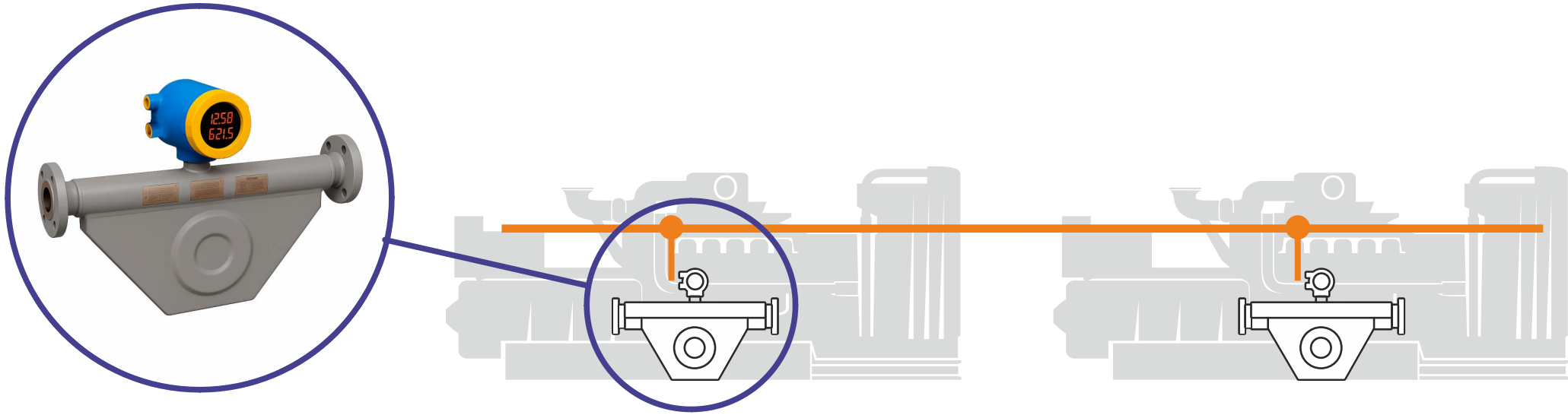
Application/ Diesel power plants



Fuel flow monitoring in diesel power plants and large genset fleets.

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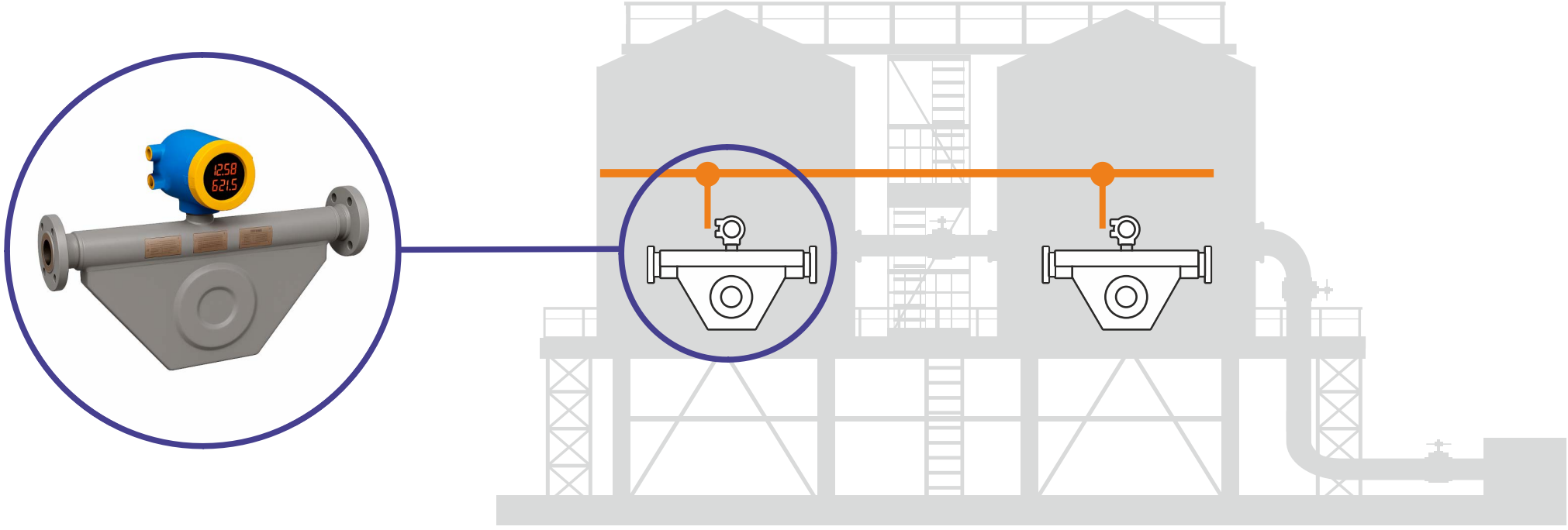
Application/ Water consumption monitoring



Pharmaceutical and food industries, semiconductor manufacturing.

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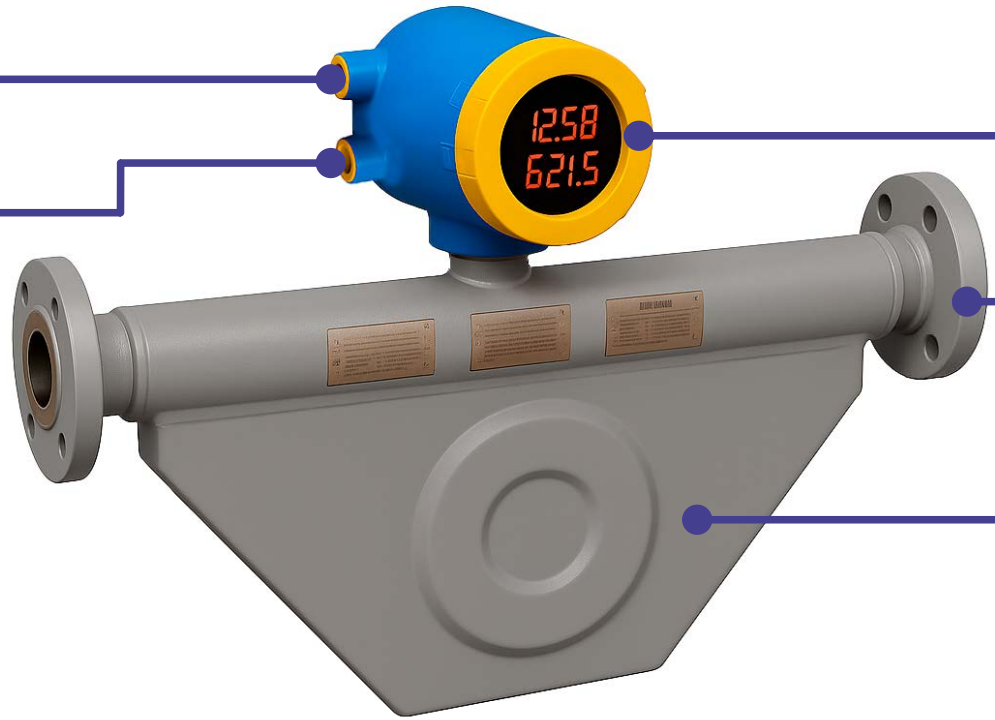
External view



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Marking

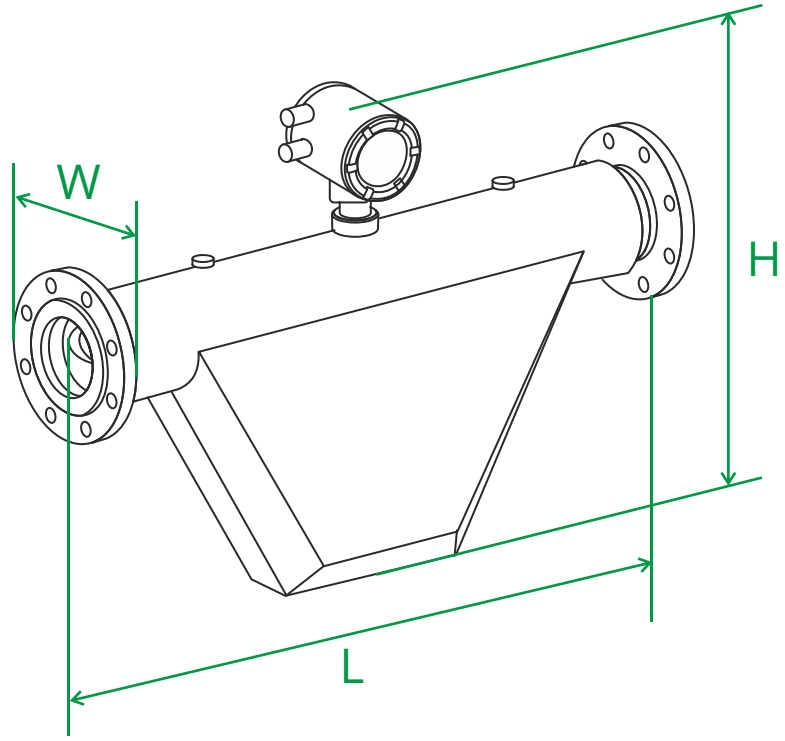
LC Corio – 1200 RS F

Maximum flow rate, l/min:
95, 380, 1200, 2300, 3800, 6700

Interface:
RS – RS-485 (Modbus RTU)

Fuel pipeline connection:
F – flange

Dimensions and weight



LC Corio model	L × H × W, mm	Weight, kg
95 RS F	404 x 403 x 157	14
380 RS F	500 x 434 x 157	27
1200 RS F	715 x 538 x 157	48
2300 RS F	900 x 617 x 157	70
3800 RS F	986 x 627 x 165	103
6700 RS F	1500 x 900 x 300	235

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Measured parameters

- ✓ Mass flow rate
- ✓ Volume flow rate
- ✓ Liquid temperature
- ✓ Liquid density

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Specifications

LC Corio model	95 RS F	380 RS F	1200 RS F	2300 RS F	3800 RS F	6700 RS F
Minimum mass flow rate, t/h	0.35	1.3	4	10	27	30
Minimum volume flow rate, L/min	7	25	77	192	514	575
Maximum mass flow rate, t/h	5.2	20	65	120	200	350
Maximum volume flow rate, L/min	100	380	1,240	2,300	3,800	6,705
Nominal diameter, mm	15	25	50	80	100	150
Liquid temperature range, °C	from –60 to +100					
Operating pressure range, Mpa	from 0 to 4					
Accuracy by volume	no more than ±0.21% (diesel fuel, heating oil, HFO)					
Accuracy by mass	no more than ±0.16% (diesel fuel, heating oil, HFO)					
Power supply, V	2 modifications – 24 DC and 220 AC					220 AC
Output interface	RS-485 (Modbus RTU); CAN J1939 / S6 via converter					
Pipeline connection	flange					

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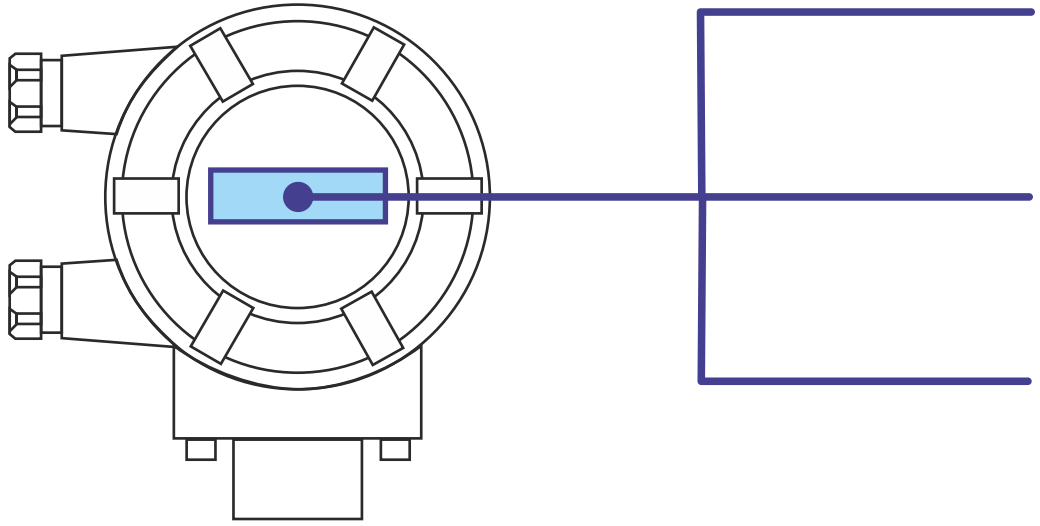
Data on display



Mass: 311.494 t
+0.4472 t/h

Volume: 346 875 L
+8.299 L/min

Temperature: 27.9 C
P: 0.898 kg/L

Display shows key data across three screens:

1. total mass and mass flow rate;
2. total volume and volume flow rate;
3. liquid temperature and density.

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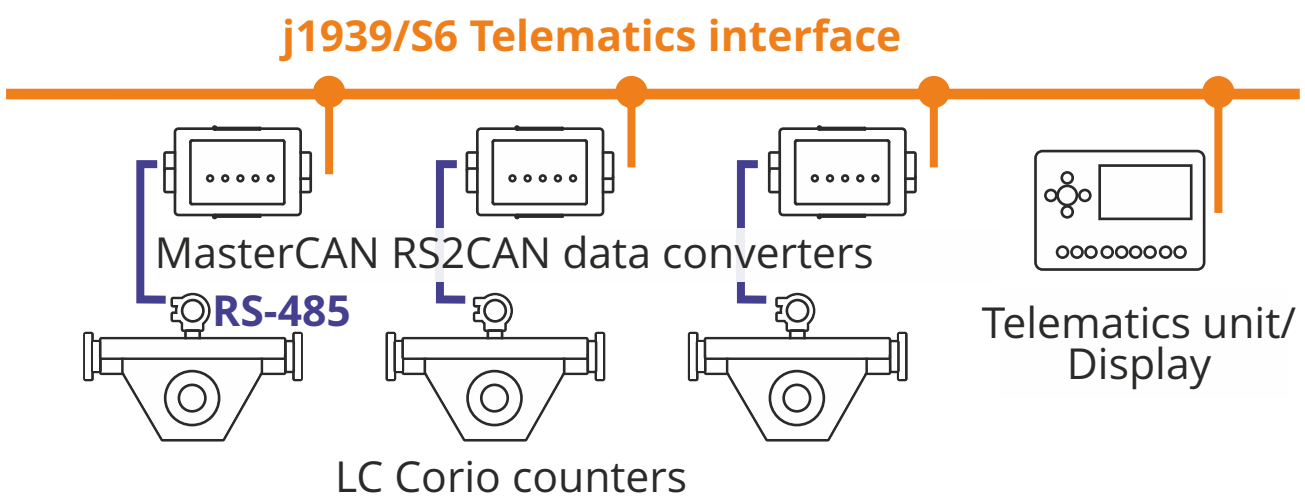
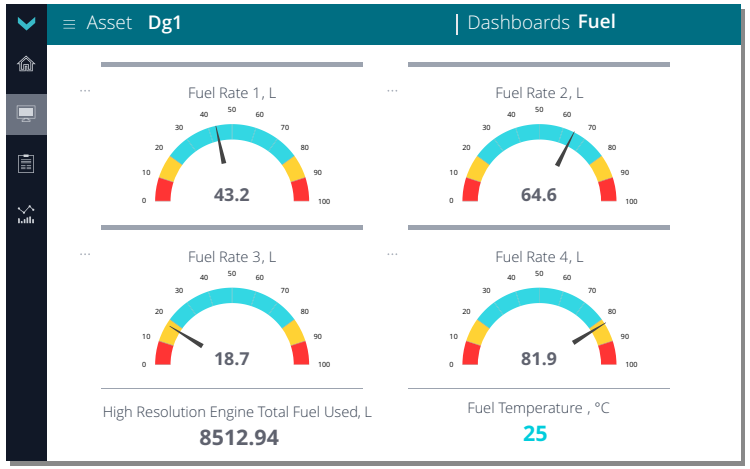
Operation within j1939/S6 telematics interface





Counters transmit data via RS-485. Converters translate this data into SPN messages and send it to j1939/S6 interface. Up to 16 meters can operate simultaneously within a single S6 network. Data is delivered to a display or telematics unit and can be sent to a telematics platform.

Summary

- ✓ LC Corio liquid counters measure liquid flow by mass and volume, and determine liquid density and temperature.
- ✓ They operate in a flow range from 7 to 6,700 L/min with a relative accuracy of 0.2%.
- ✓ LC Corio is suitable for liquids with any kinematic viscosity.
- ✓ LC Corio is resistant to vibration, as well as temperature and pressure fluctuations.
- ✓ Using data converters, up to 16 LC Corio counters can be integrated into the S6 telematics interface for simultaneous monitoring of multiple assets.

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